



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 141832-989	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/008048	International filing date (day/month/year) 25 June 2003 (25.06.2003)	Priority date (day/month/year) 25 June 2002 (25.06.2002)
International Patent Classification (IPC) or national classification and IPC H01L 21/304		
Applicant TOKYO ELECTRON LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 15 December 2003 (15.12.2003)	Date of completion of this report 14 July 2004 (14.07.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/008048

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19)

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

 the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages _____ the claims, Nos. _____ the drawings, sheets/fig _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-16	NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

2. Citations and explanations

Claim 1

The subject matter of claim 1 does not involve an inventive step on account of the inventions described in document 1 [US, 5063609, A (APPLIED MATERIALS, INC.), 11 October 1989], document 2 [JP, 2002-110611, A (TEXAS INSTRUMENTS JAPAN LTD.), 12 April 2002], and document 3 [JP, 9-251975, A (SAKAGUCHI DENNETSU K.K.), 22 September 1997] cited in the ISR. The aforesaid document 1 discloses a vapor generator of the same shape as this application's. Disposing a vapor generator so that the axis of a cylinder-like body is horizontal can be appropriately achieved by a person skilled in the art.

Claim 2

The subject matter of claim 2 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and document 4 [JP, 2000-91288, A (PUREX CO., LTD.), 31 March 2000] and document 5 [JP, 2001-252550, A (YOKOGAWA ELECTRIC CORPORATION), 18 September 2001] cited in the ISR. The aforesaid documents 4 and 5 disclose constituting a device with fluororesin.

Claim 3

The subject matter of claim 3 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and document 6 [JP, 9-327669, A (IBIDEN CO., LTD.), 22 December 1997] cited in the ISR. The aforesaid document 6 suggests, in relation to improving heat conduction efficiency, a material with a higher thermal conductivity than resin.

Claim 4

The subject matter of claim 4 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and 6 and document 7 [JP, 9-199472, A (KOMATSU ELECTRONICS K.K.), 31 July 1997] cited in the ISR. The aforesaid document 7 suggests a plate consisting of a metal material covered with resin.

Claim 5

The subject matter of claim 5 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3. The aforesaid document 1 describes a shell that limits tank deformation. Constituting a heater so that a shell is attached can be appropriately achieved by a person skilled in the art.

INTERNATIONAL PRELIMINARY EXAMINATION REPORTInternational application No.
PCT/JP03/08048**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Box V:**Claim 6**

The subject matter of claim 6 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and 6. Providing a heater in two locations can be appropriately achieved by a person skilled in the art.

Claim 7

The subject matter of claim 7 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and 6 and 7. The aforesaid document 7 discloses a plate consisting of a metal material covered with resin.

Claim 8

The subject matter of claim 8 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3. Positioning the upper edge of a heater's heat conduction block at essentially the same height as the height set for the surface of pure water in a tank can be appropriately achieved by a person skilled in the art.

Claim 9

The subject matter of claim 9 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and document 8 [Microfilm of the specification and drawings annexed to the written application of Japanese Utility Model Application No. 238/1984 (Laid-open No. 128733/1984) (NEC CORPORATION), 30 August 1984] cited in the ISR. The aforesaid document 8 discloses a piping constitution that is the same as this application's invention.

Claim 10

The subject matter of claim 10 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and document 9 [JP, 10-55991, A (HITACHI, LTD.), 24 February 1998] cited in the ISR. The aforesaid document 9 discloses providing a baffle in a semiconductor device manufacturing process.

Claim 11

The subject matter of claim 11 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and 9. A constitution wherein an opening position in a baffle is not covered can be appropriately achieved by a person skilled in the art.

Claim 12

The subject matter of claim 12 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and document 10 [US, 5520743, A (TOKYO ELECTRON K.K.), 31 August 1993] cited in the ISR. The aforesaid document 10 discloses a seal member for a cylindrical container. Pushing and submerging a seal member using a shell, etc. and forming an air- and water-tight seal can be appropriately achieved by a person skilled in the art.

Claim 13

The subject matter of claim 13 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3 and 10. Constituting matters so that a cylindrical body and a plate-like body do not touch one another can be appropriately achieved by a person skilled in the art.

Claim 14

The subject matter of claim 14 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3. Constituting matters so that the space inside a tank has an essentially cylindrical shape with its center axis oriented horizontally can be appropriately achieved by a person skilled in the art.

INTERNATIONAL PRELIMINARY EXAMINATION REPORTInternational application No.
PCT/JP03/08048**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Box V:

Claim 15

The subject matter of claim 15 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3. Constituting matters so that a tank's shape is like that of the present application's invention can be appropriately achieved by a person skilled in the art.

Claim 16

The subject matter of claim 16 does not involve an inventive step on account of the inventions described in the aforesaid documents 1~3. The aforesaid document 2 discloses processing a substrate using a processing fluid that contains ozone.